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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/251,183 02/17/99 LIN

M MSLIN98-002C

MMC2/1020

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EXAMINER

GARCIA, J

ART UNIT

PAPER NUMBER

2823

DATE MAILED:

10/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/251,183

Applicant(s)

Lin

Examiner

Joannie Adelle Garcia

Group Art Unit

2823



☒ Responsive to communication(s) filed on 8/7/00

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-83 is/are pending in the application

Of the above, claim(s) 14, 29-48, 61, and 69 is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13, 15-28, 49-60, 62-68, and 70-83 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on 8/7/00 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Claims 3-10, and 50-55, are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims merely labels the top metallization system, and the overlaying interconnecting metallization structure, and therefore, do not further limits the processes of claims 1 and 49, respectively.

Applicant argues that, for instance, claim 3 claims that the metal lines that form the top metallization system can be used for signal lines further specifying that these signal lines can meet specific electrical function of interconnect by allowing for metal lines that are wide when compared with the metal lines of the underlying interconnect network. However, claim 1 requires that the top metal lines be wider than the first metal lines. Furthermore, it is submitted that any conductive lines could function as signal lines. The remaining claims 4-10, and 50-55, similarly do not further limit the process of the claims they depend on.

Applicant argues that the step recited in claim 9 is included as part of the processes of the invention in view of the fact that electrical contact points can be provided concurrently with the creation of other lines of metal interconnect, and that the creation of contact points is part of the processes of the invention without requiring any special processing sequence others than the processing steps of the invention. However, claim 9 is not so limited, and claim 1 inherently includes formation of contact points.

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 15, 19, 21, 81, and 82, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15, as amended, recites the limitation "polymer layers" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19, as amended, recites the limitation "polymer insulating, separating layers" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 21, as amended, recites the limitation "one or more polymer insulating, separating layers" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

In claim 81, line 13, "raid" should be replaced with --said--.

In claim 82, line 5, "polyimide" should be replaced with --polymer--.

Claims 1-13, 15-28, 49-60, 62-68, and 70-83, are rejected under 35 U.S.C. as being unpatentable over Bandyopadhyay et al, in combination with Yamada'778, Yamada'020, Wolf and Cronin.

The rejection is maintained as stated in the Office Actions mailed 4-25-00, 10-20-99, and as stated below.

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Applicant argues that Bandyopadhyay et al does not teach the formation of a polymer insulating, separating layer over a passivation layer. However, Bandyopadhyay is not relied upon for that purpose.

Applicant argues that Bandyopadhyay et al does not disclose the use of PECVD nitride-PECVD oxide as the passivation layer. The examiner mistakenly stated that Bandyopadhyay et al was relied upon for that purpose. Bandyopadhyay et al is not relied upon for that purpose.

Applicant argues that there is no suggestion in Bandyopadhyay et al of any passivation layer, much less of materials or deposition processes that would be used for such a layer. However, Bandyopadhyay et al discloses formation of passivation layer 22.

Applicant argues that Bandyopadhyay et al does not disclose that the insulating, separating layer 24 is substantially thicker than the passivation layer 22. However, Bandyopadhyay et al discloses such a step as shown in Figure 2.

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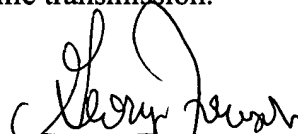
Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. **See MPEP 203.08.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner J. Garcia whose telephone number is (703) 306-5733. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax number for this group is (703)308-7722(and 7724), and (703) 305-3431 (and 3432). MPEP 502.01 contains instructions regarding procedures used in submitting responses by facsimile transmission.


JAG

October 14, 2000


George Fourson
Primary Examiner
Art Unit 2823